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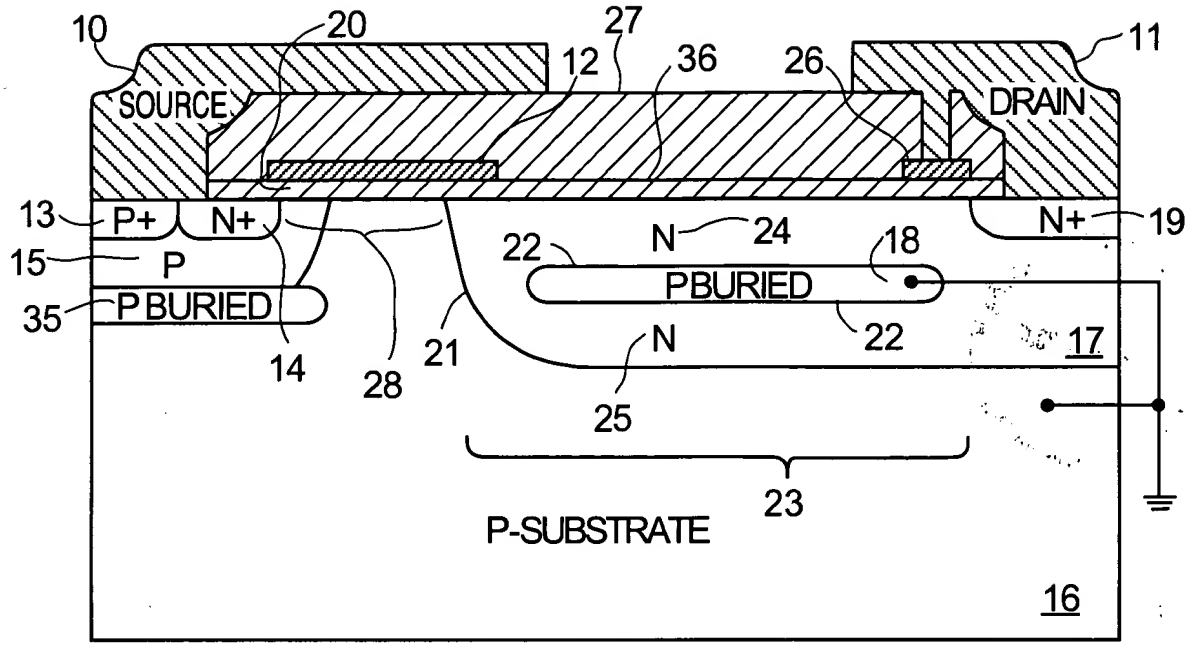
10
20
27
12
36
26
11
SOURCE
DRAIN
13
P+
N+
N+
19
15
P
22
N
24
18
35
P BURIED
PBURIED
22
14
28
21
N
17
25
23
P-SUBSTRATE
16

FIG. 1

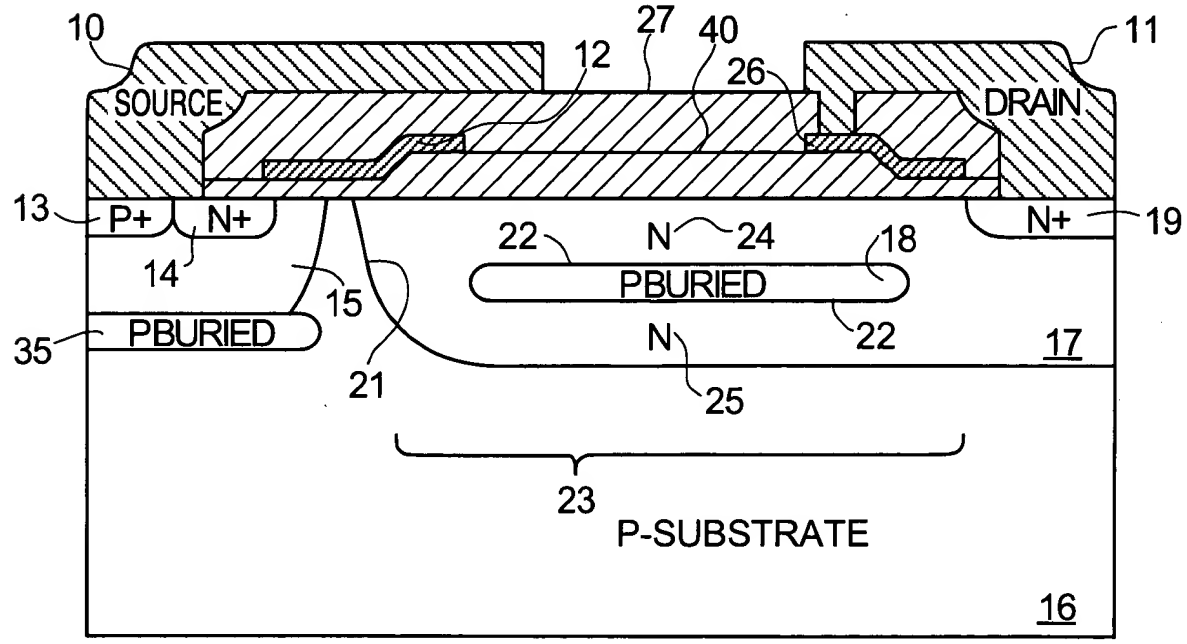
10
27
40
12
26
11
SOURCE
DRAIN
13
P+
N+
N+
19
22
N
24
18
14
15
PBURIED
35
PBURIED
22
N
17
21
25
23
P-SUBSTRATE
16

FIG. 2

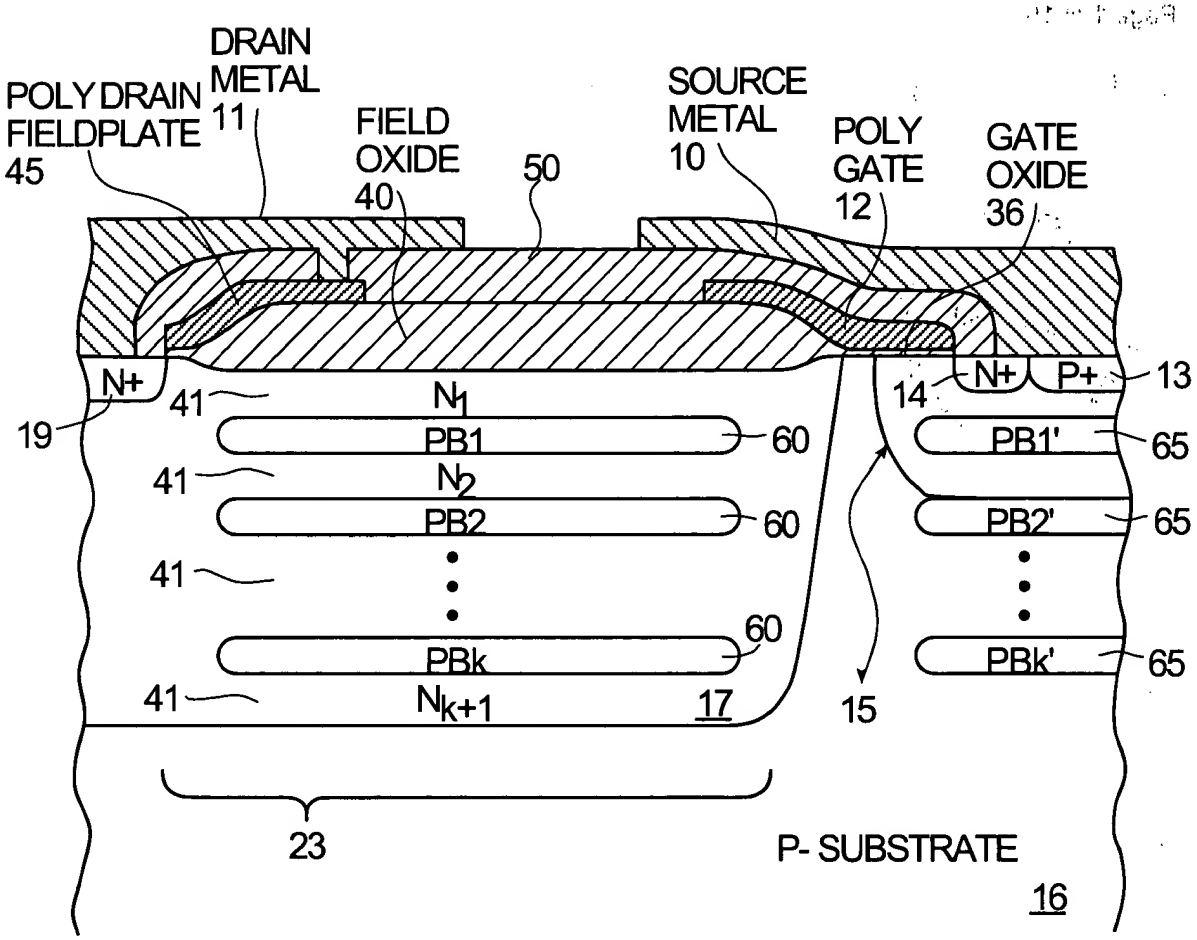
DRAIN METAL 11
POLY DRAIN FIELDPLATE 45
FIELD OXIDE 40
50
SOURCE METAL 10
POLY GATE 12
GATE OXIDE 36
N+
19
41
N1
PB1
60
41
N2
PB2
60
41
PBk
60
41
Nk+1
17
15
14
N+
P+
13
PB1'
65
PB2'
65
PBk'
65
23
P- SUBSTRATE
16

FIG. 3

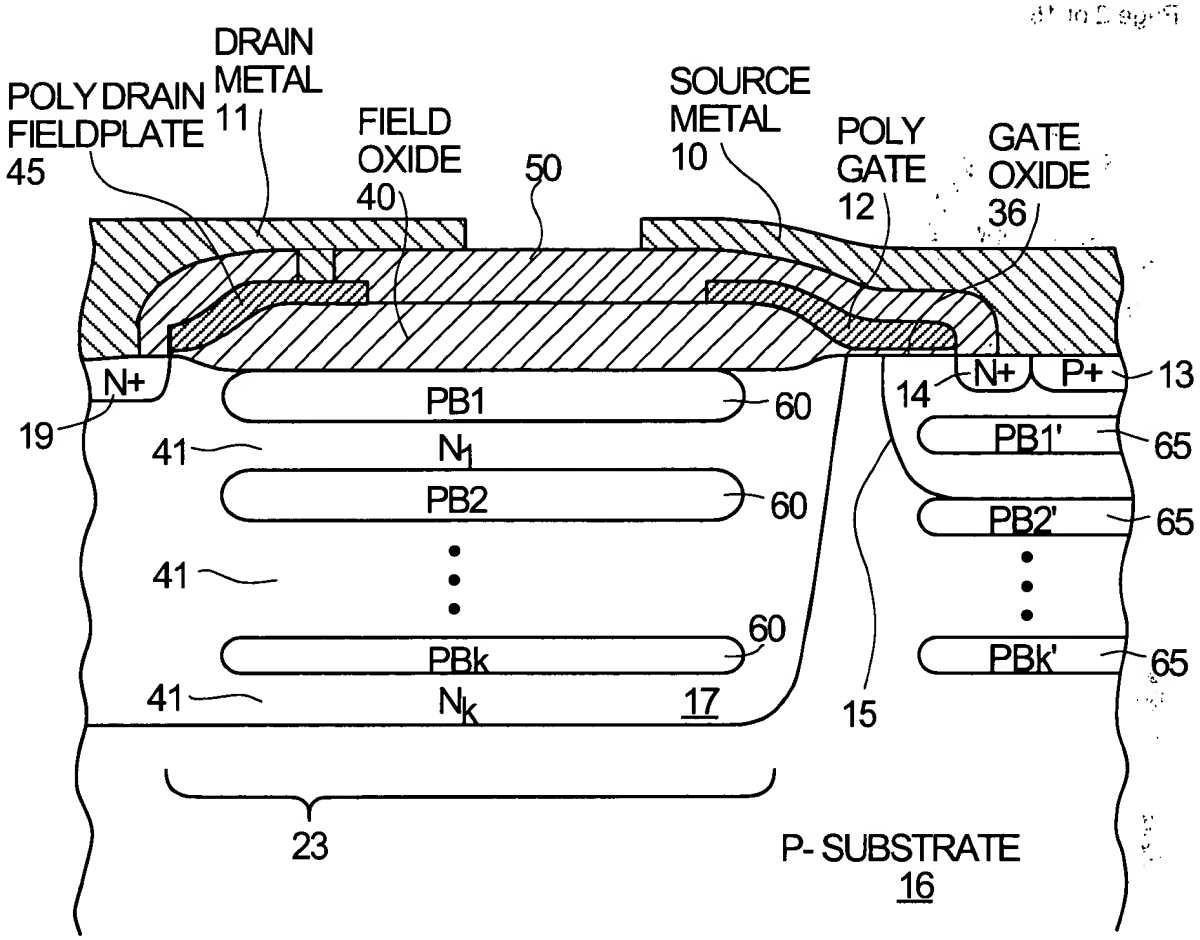
DRAIN METAL 11
POLY DRAIN FIELDPLATE 45
FIELD OXIDE 40
50
SOURCE METAL 10
POLY GATE 12
GATE OXIDE 36
N+
19
41
PB1
60
N1
PB2
60
41
41
PBk
60
41
Nk
17
N+
P+
13
14
PB1'
65
PB2'
65
PBk'
65
15
23
P- SUBSTRATE 16

FIG. 4

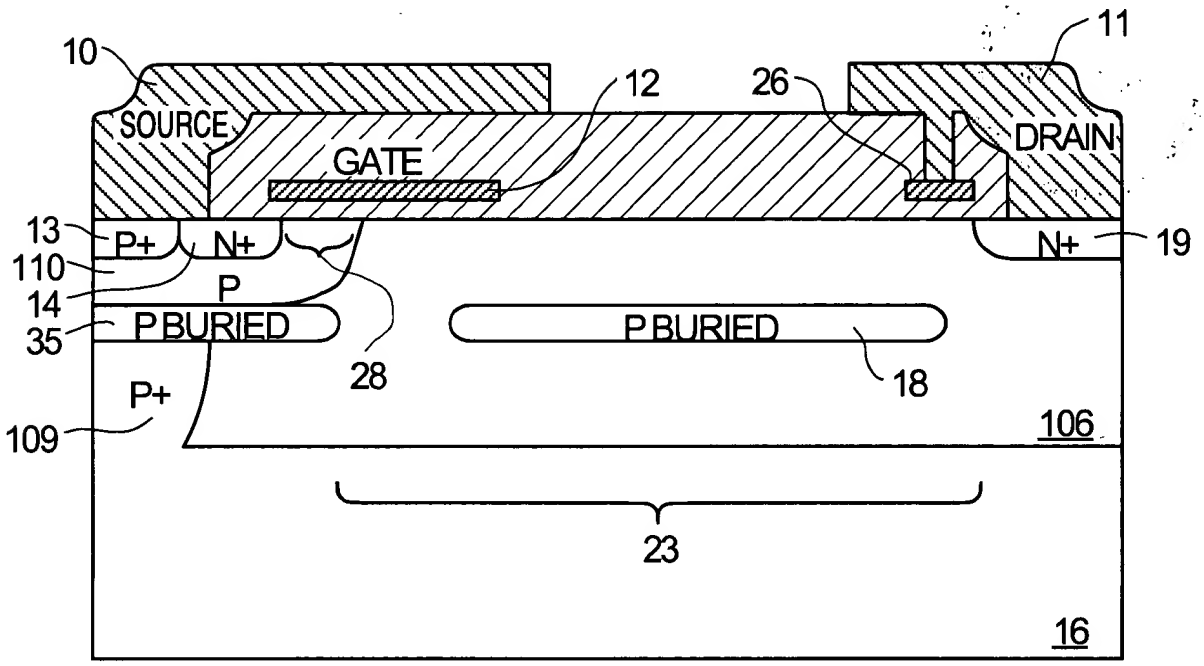
10
11
12
26
SOURCE
GATE
DRAIN
13
P+
N+
N+
19
110
14
P
35
PBURIED
PBURIED
28
18
P+
109
106
23
16

FIG. 5

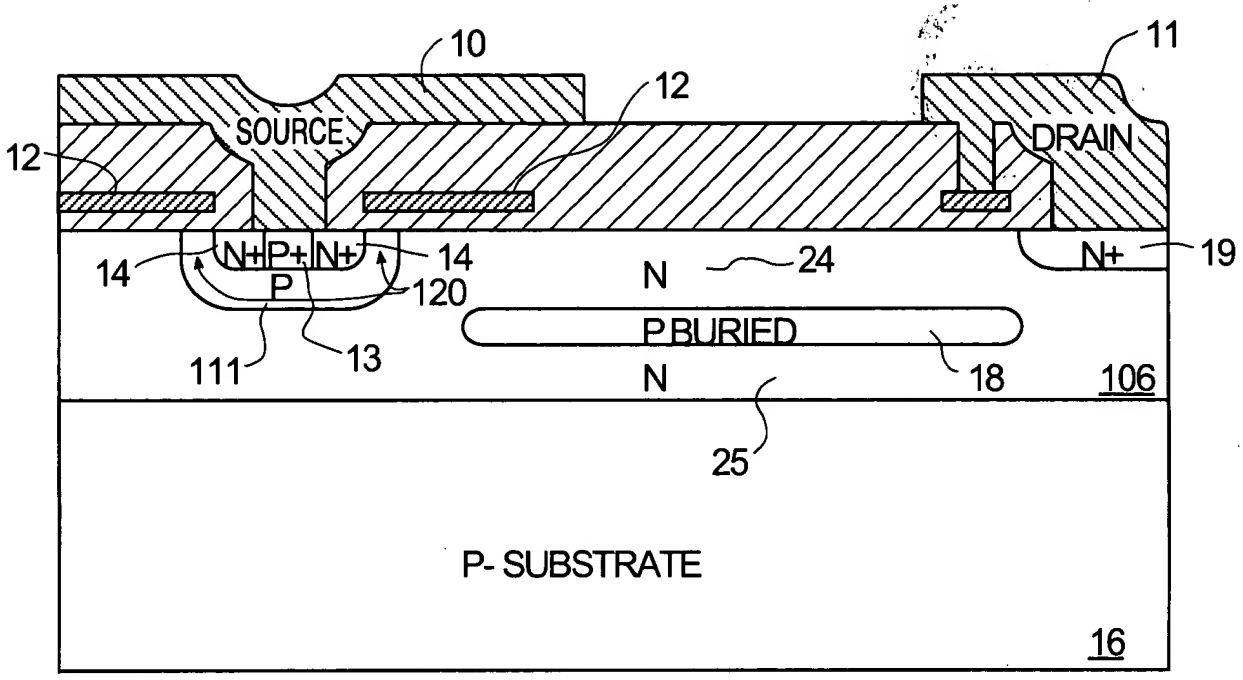
10
11
12
12
SOURCE
DRAIN
N+P+N+
14
14
P
120
N
24
N+
19
PBURIED
111
13
18
N
106
25
P- SUBSTRATE
16

FIG. 6

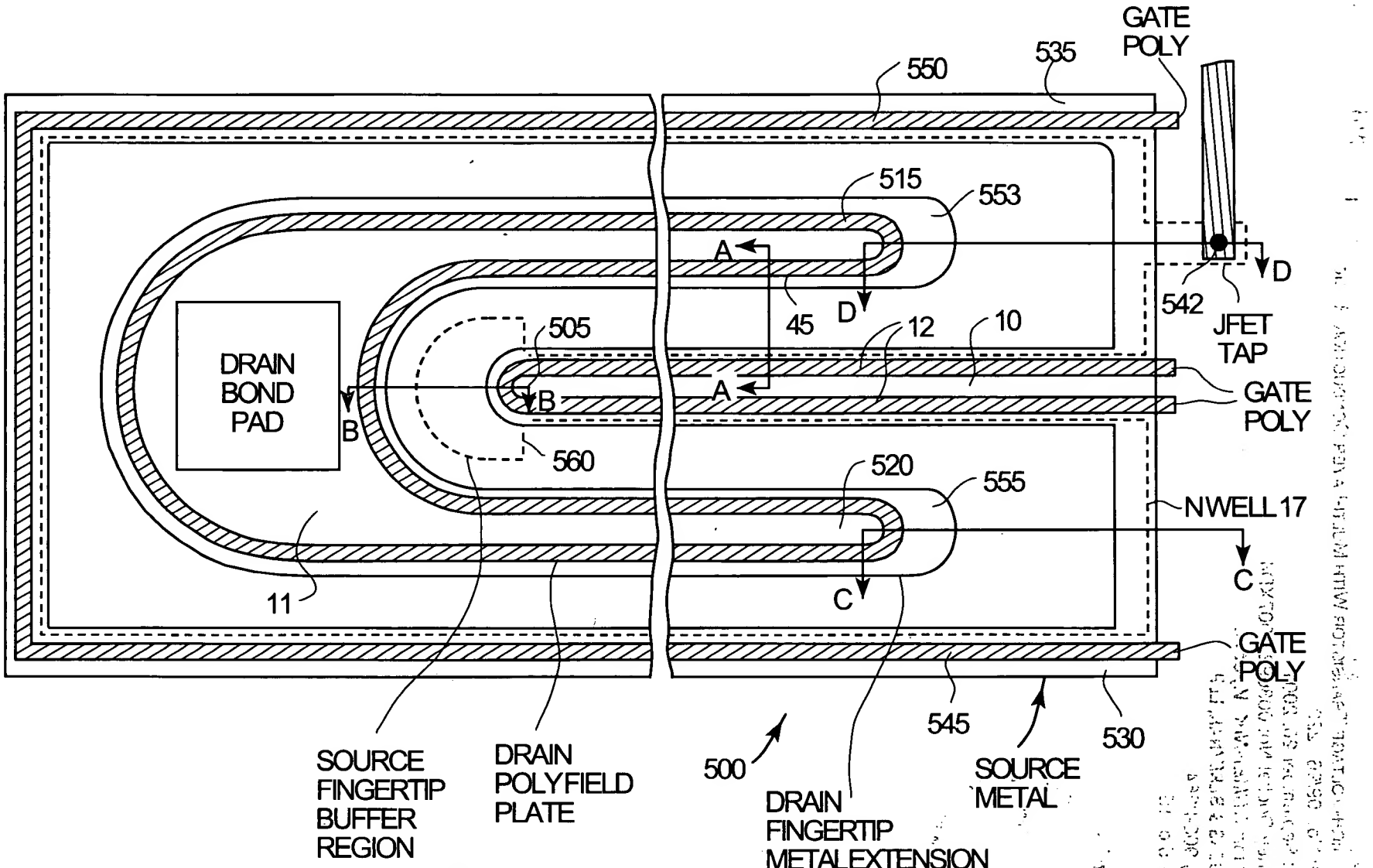
GATE
POLY
535
550
515
553
A
D
45
D
542
JFET
TAP
505
12
10
DRAIN
BOND
PAD
B
B
A
GATE
POLY
560
520
555
NWELL 17
C
11
C
GATE
POLY
545
530
SOURCE
FINGERTIP
BUFFER
REGION
DRAIN
POLYFIELD
PLATE
500
DRAIN
FINGERTIP
METALEXTENSION
SOURCE
METAL

FIG. 7

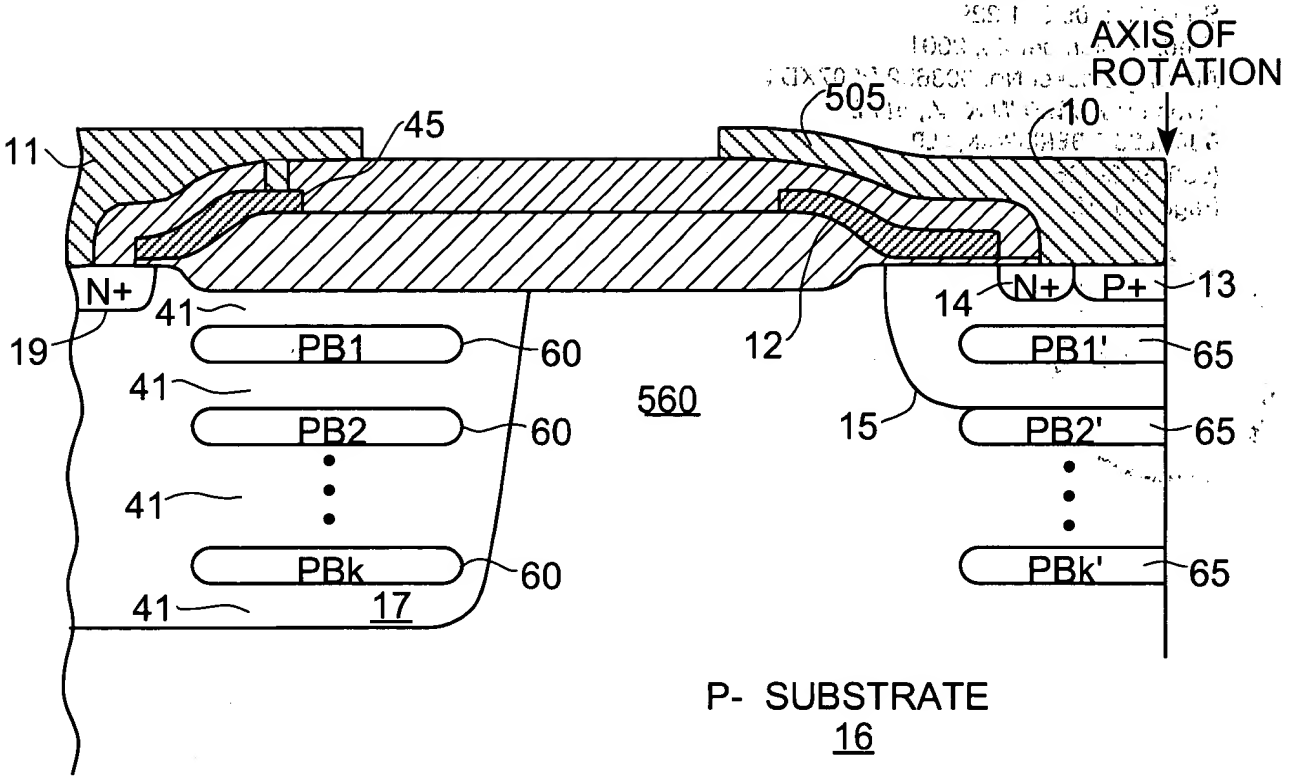
AXIS OF ROTATION
505
10
11
45
N+
41
19
PB1
60
41
PB2
60
41
PBk
60
41
17
560
12
14
N+
P+
13
PB1'
65
15
PB2'
65
PBk'
65
P- SUBSTRATE
16

FIG. 8

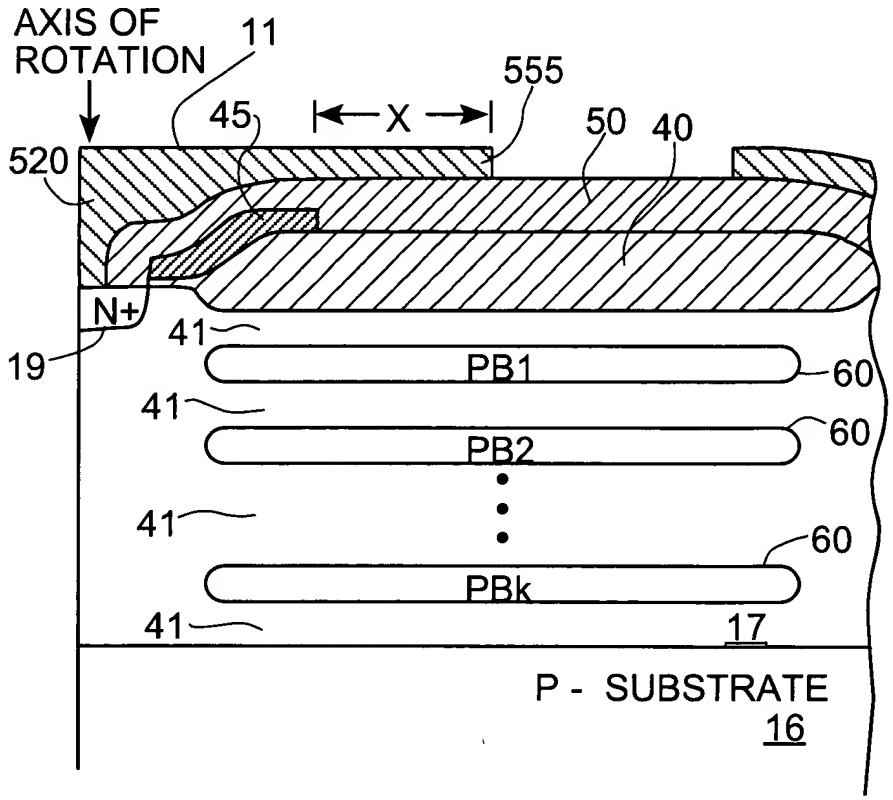
AXIS OF ROTATION
11
555
45
X
50
40
520
N+
41
19
PB1
60
41
PB2
60
41
PBk
60
41
17
P - SUBSTRATE
16

FIG. 9

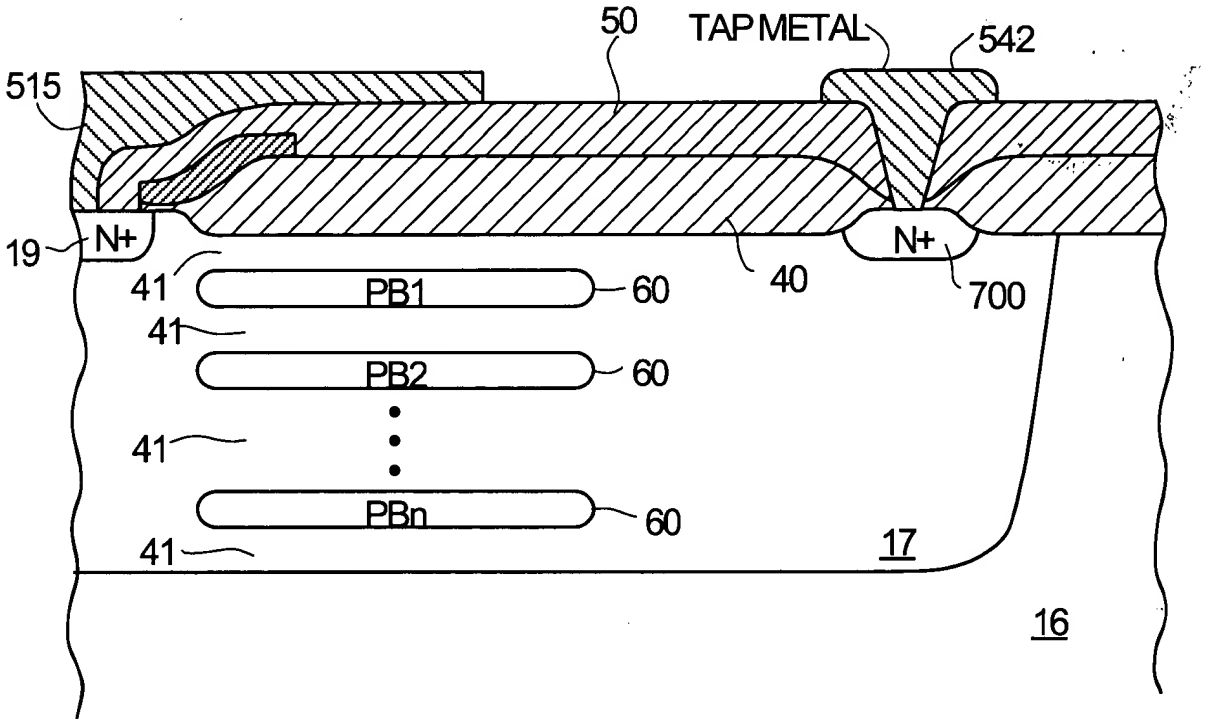
50
TAP METAL
542
515
19
N+
N+
41
PB1
60
40
700
41
PB2
60
41
PBn
60
41
17
16

FIG. 10

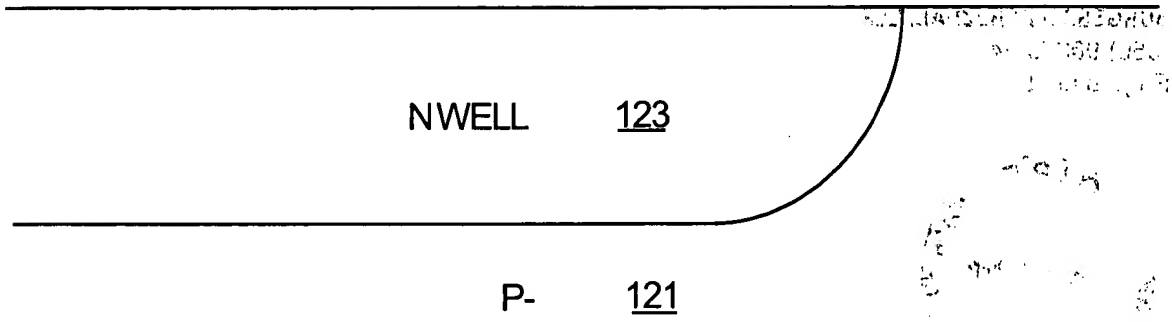

FIG. 11a

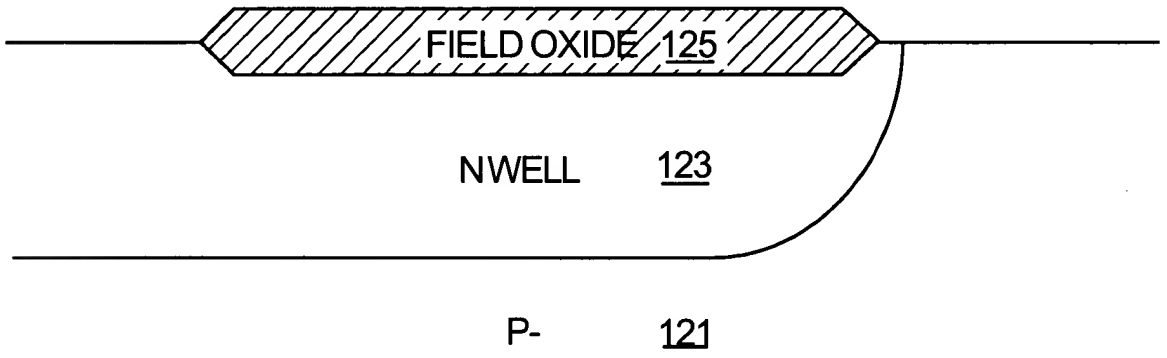

FIG. 11b

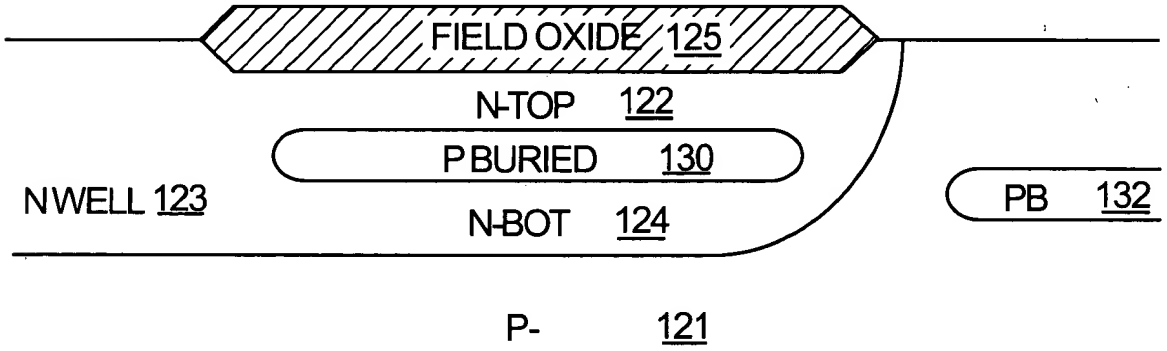

FIG. 11c

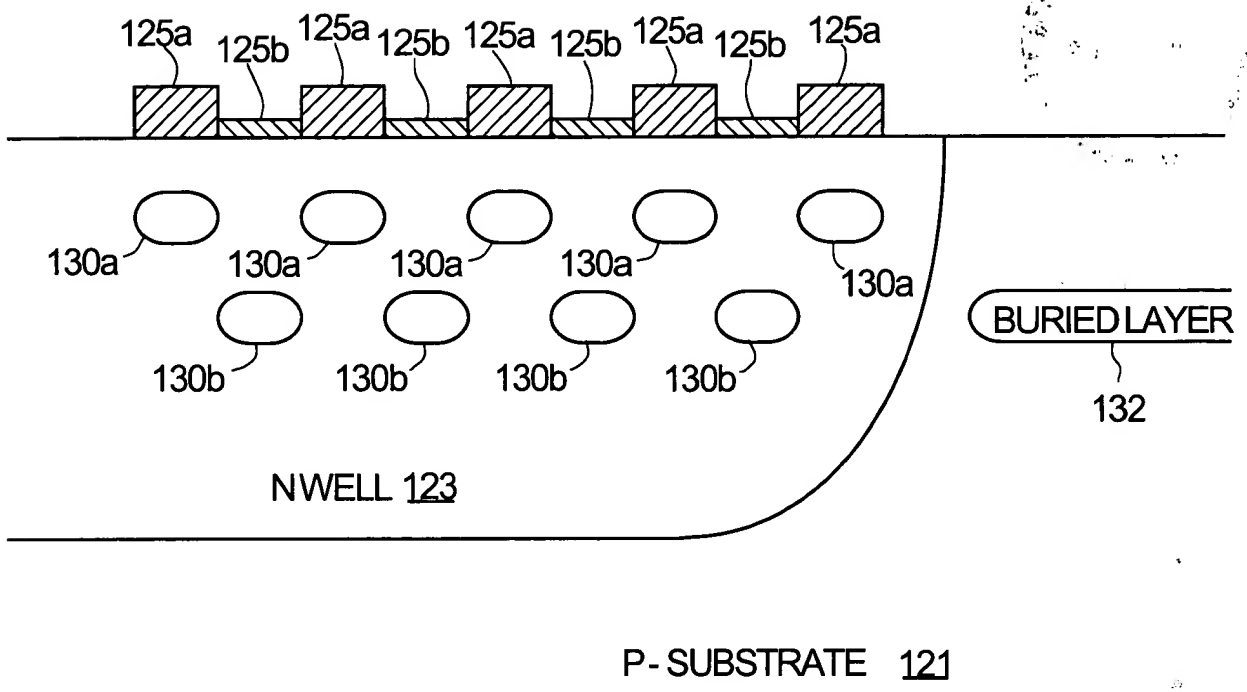
125a
125b
125a
125b
125a
125b
125a
125b
125a
130a
130a
130a
130a
130a
130b
130b
130b
130b
BURIED LAYER
132
NWELL 123
P-SUBSTRATE 121

FIG. 11d

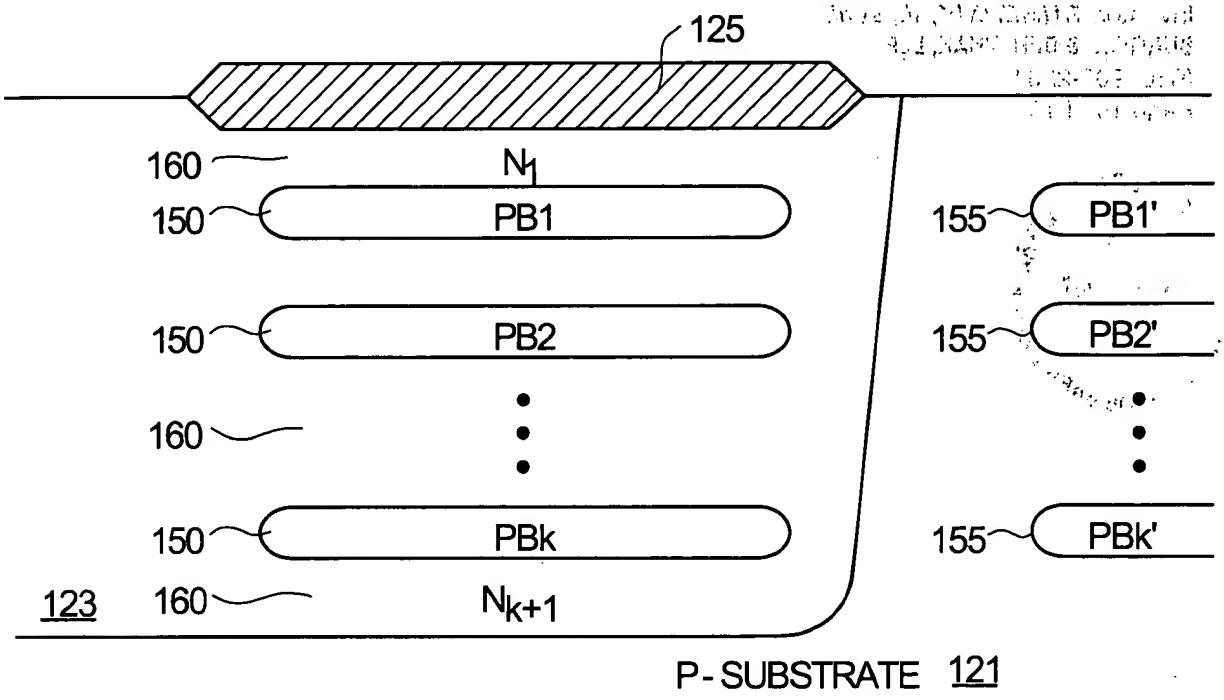

FIG. 11e

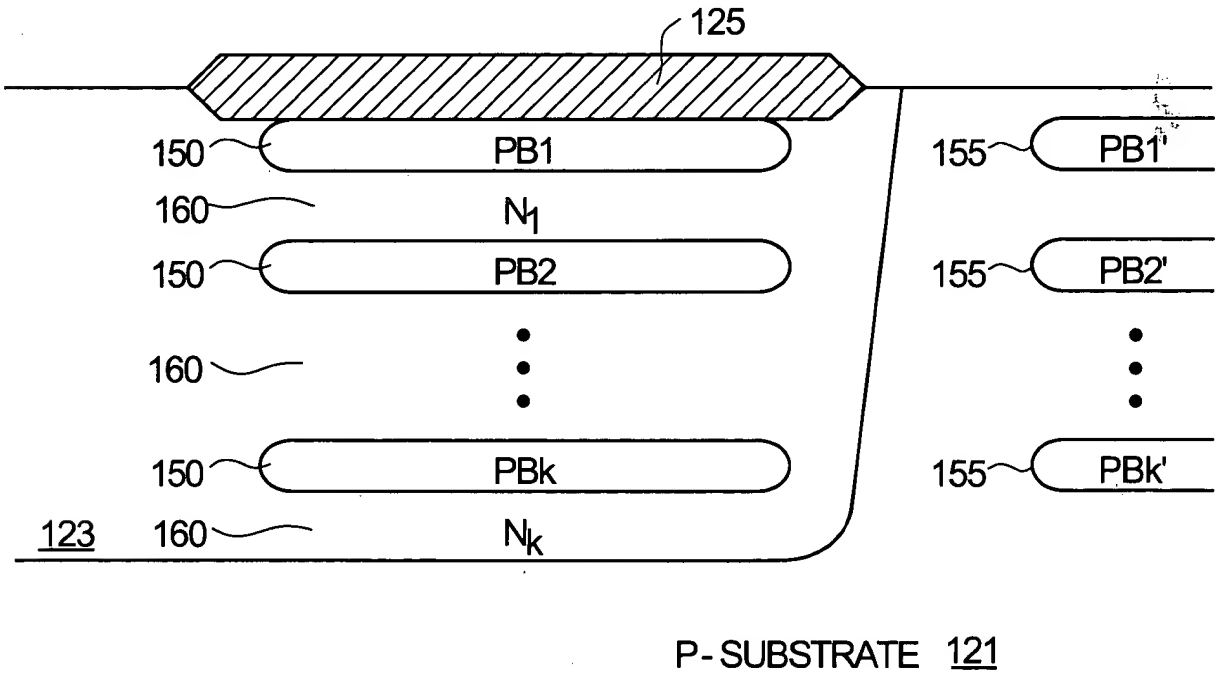

FIG. 11f

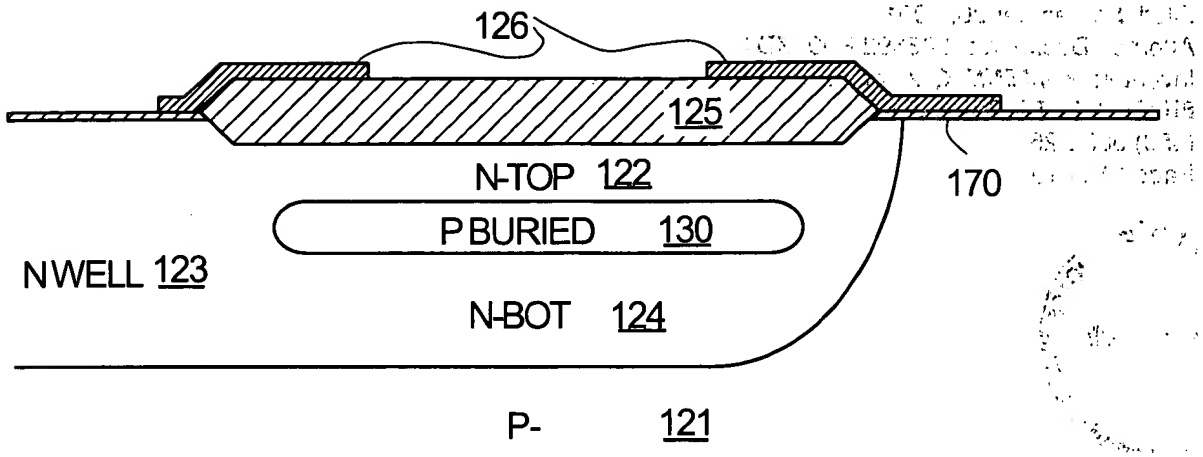

FIG. 11g

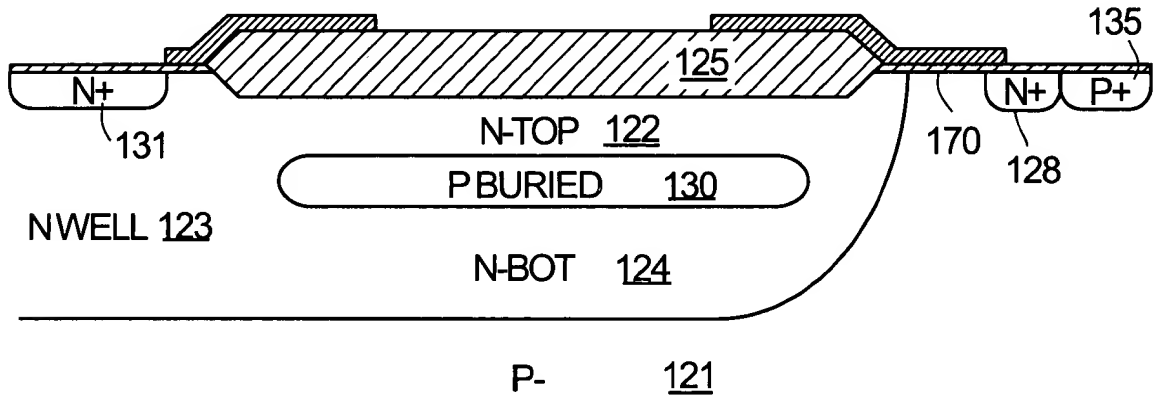

FIG. 11h

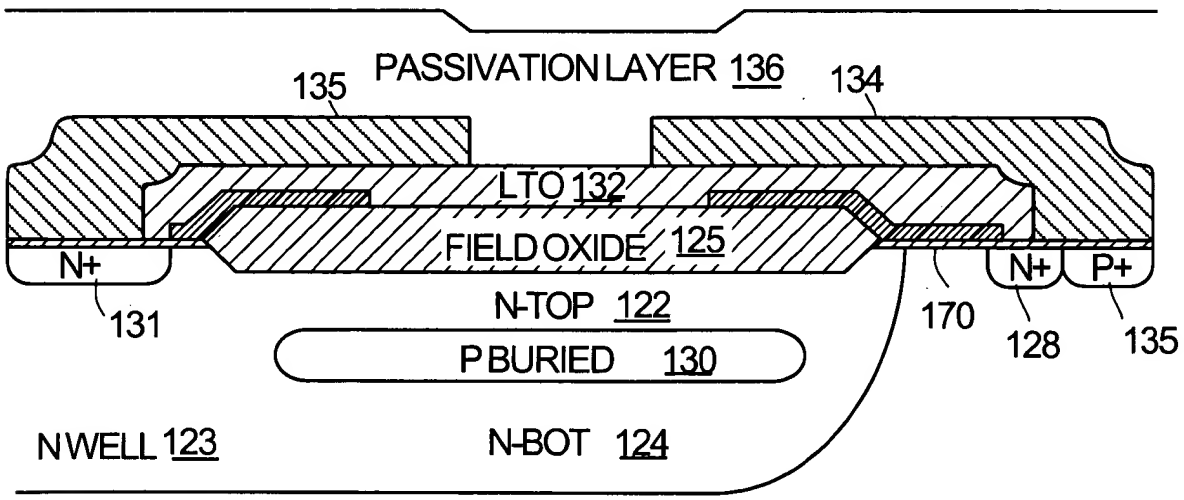

FIG. 11i

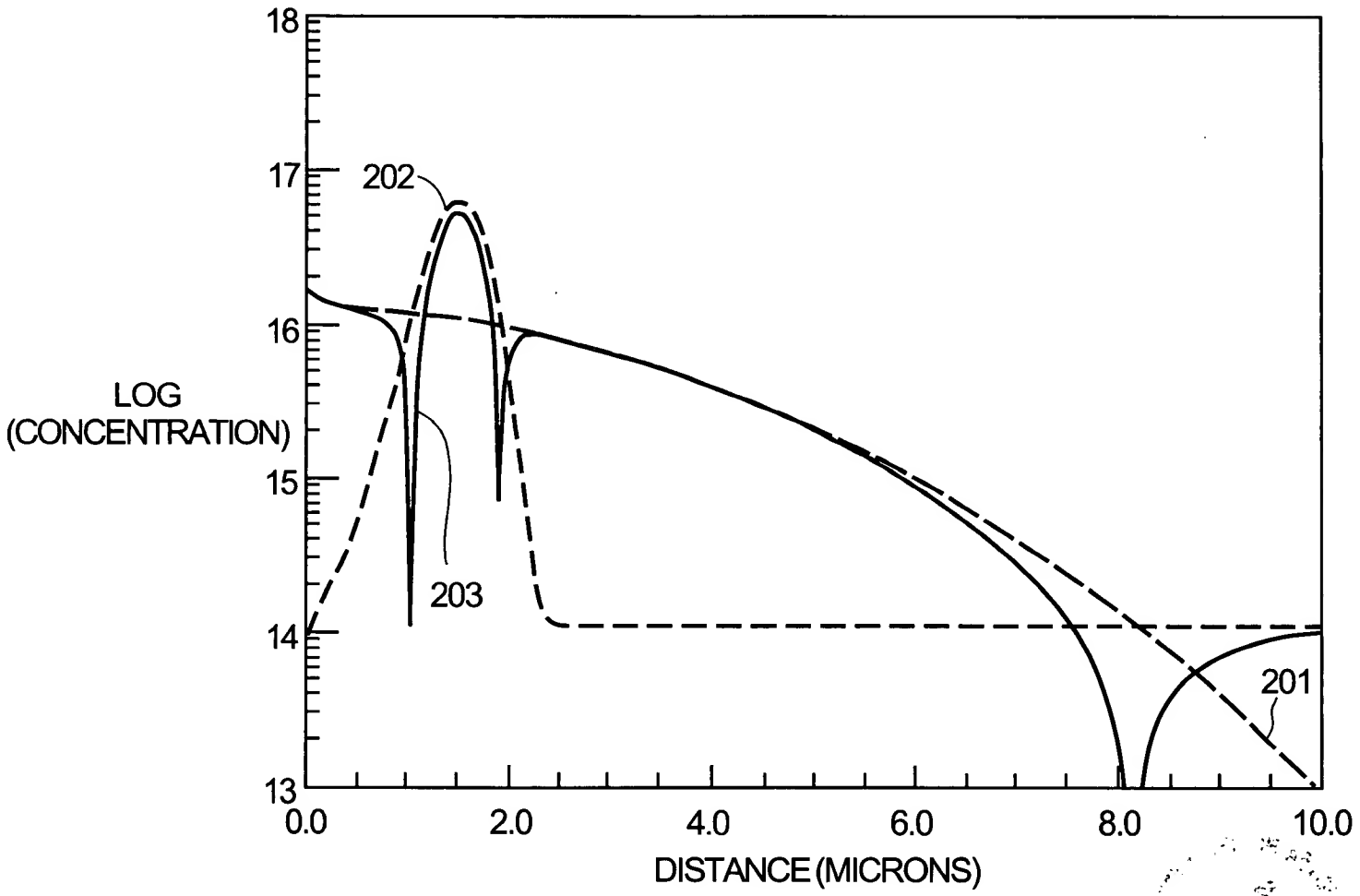
18
17
16
15
14
13
LOG
(CONCENTRATION)
202
203
201
0.0
2.0
4.0
6.0
8.0
10.0
DISTANCE (MICRONS)

FIG. 12

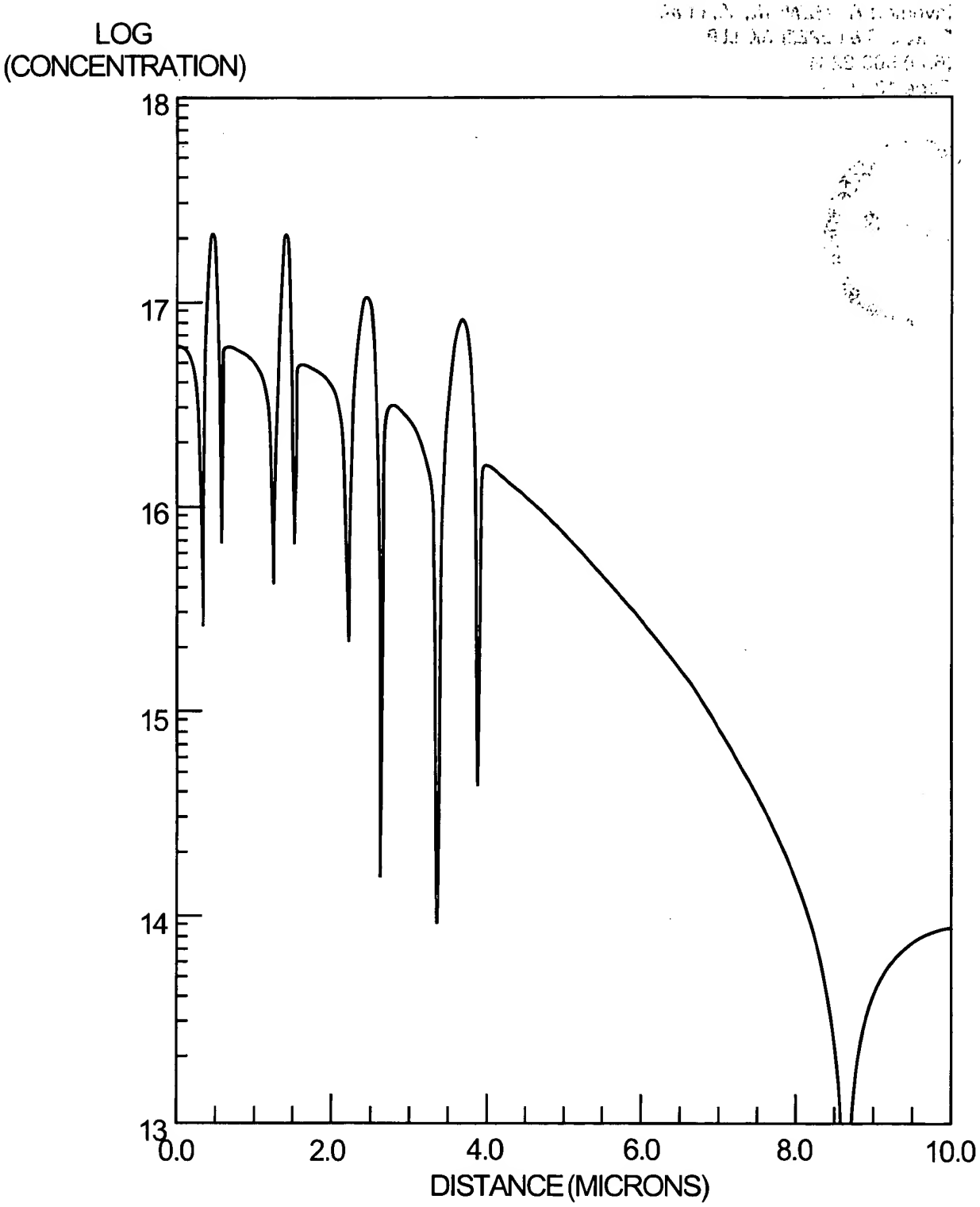
LOG
(CONCENTRATION)
18
17
16
15
14
13
0.0
2.0
4.0
6.0
8.0
10.0
DISTANCE (MICRONS)

FIG. 13

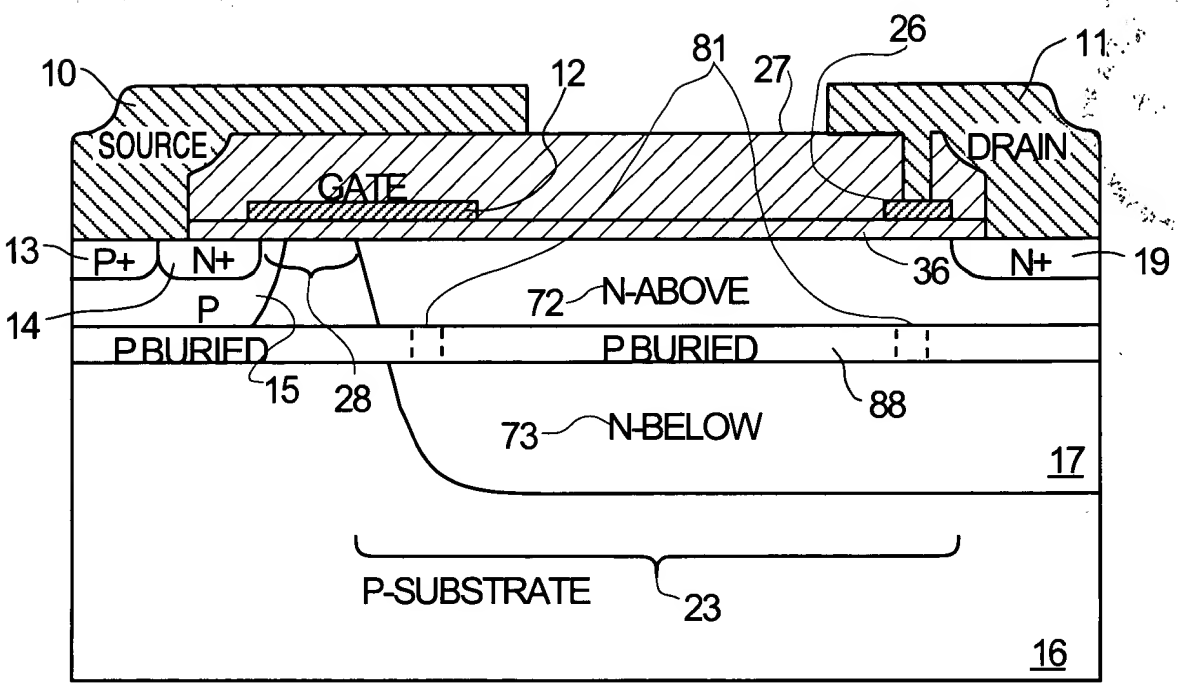
10
SOURCE
12
81
27
26
11
DRAIN
GATE
13
P+
N+
36
N+
19
14
P
72
N-ABOVE
P BURIED
P BURIED
15
28
88
73
N-BELOW
17
P-SUBSTRATE
23
16

FIG. 14